NLTUA OPERATIONS REPORT – November 2015

TO: Chris Holton, NLTUA

FROM: Marcus Evans, CH2M HILL OMI

DATE: December 8, 2015

COPY: Kevin Dahl, CH2M HILL OMI
Liz Hart, CH2M HILL OMI

This report describes our activities during the month of November 2015. If you require additional information that would make these monthly reports more useful to you, please let us know. Permit compliance report data is being submitted to the State of Michigan electronically. The discharge monitoring report can be viewed at https://miwaters.deq.state.mi.us/miwaters

Treatment Plant

Total Influent Flow Daily Average = 46,050 GPD Last Month = 50,118 Last Year = 46,402

Total Electrical Usage Monthly = 22,242 Kw Hr. Last Month = 19,758 Last Year = 18,170

On Friday 11/6/15, we were called out to the WWTP early in the morning hours due to a recycle pump failure. The recycle pump failure was caused by a power blip. After putting the recycle pump back in service, we verified that the plant had returned to normal operational flow before departing. We have had several call outs of this nature since the August 2nd storm. We believe these power blips are most likely the result of damaged trees that are bumping the lines. We are currently in communication with Andy Bliss from Top Line Electric to program the VFD's for the recycle pumps to restart automatically in the event of a power blip or outage. The recent frequency of these call outs warrants a remedy to this situation.

On Friday 11/20/15, Andy Bliss from Top Line Electric made the programming changes to the VFD's for the recycle pumps to restart automatically after a power outage or blip. This will eliminate future callouts in the event of a power blip. A full power outage will still trigger a call out because the generator will run.

On Wednesday 11/4/15 we discovered that the effluent control structure was backed up from the upper sand filter. We determined that the sand in this sand filter was packed together too tightly and was blinding off with sediment. We used a .5" copper tubing lance to blast air down into the sand filter to free up the sand and get it turning over again. Once this was complete, the flow resumed through the sand filter. We then air blasted the reject line out to basin 3.

On Monday 11/9/15, we arrived at the plant to find that the media in Cell 3 had compacted around the effluent screen leading to Cell 4. This caused cells 1, 2, 3, and the primary anoxic basin to back up. It was not yet at alarm status but would have been by the evening. We were able to free the media from the screens by increasing the air flow to the cell. As the media began to move freely the water began to flow through to the other cells.

On Tuesday 11/10/15, we completed the quarterly monitoring well sampling. This sampling event went well.

On Tuesday 11/17/15, we installed the newly repaired blower number 2. We are excited to have 2 operational blowers again! We will specifically run this blower for some time to verify its proper operation.

Lift Stations / Collection system (Including Residential Grinder Pump Stations)

On Thursday 11/12/15, we completed the annual collection system manhole inspections. We will be reviewing the data obtained during this survey and relay any recommendations that we may have at that time. One area of concern is the significant amount of grease in the Waukazoo sewer.

On Tuesday 11/17/15, we performed some kitchen inspections along Waukazoo with Chris Holton to determine the source of the grease that is fouling the sanitary sewer. We found that the grease trap needs to be cleaned at Tucker's. We made the chef aware and he was in the process of accomplishing that when we left. The Garage and Cafe Lelu do not have grease traps currently. Chris Holton is going to determine what regulations the sewer authority requires for grease traps for these restaurants.

On Monday 11/23/15, Tucker's had Houdek's Pumping Service clean their grease trap. On Tuesday 11/24/15, PCS arrived to water jet Waukazoo. After several attempts, they were able to remove the grease build up from the sanitary sewer. We checked several manholes downstream of Waukazoo to the Main Lift station to verify that the grease did not plug up the sewer anywhere else.

On Tuesday 11/17/15, we were called out for a high well at Northport Point Lift Station. Upon arrival we discovered that the Multitrode lift station controller had quit working. We placed the lift station in backup control to operate the system on the floats instead of the level transducer controller. We found the wet well in high level but the station also had a low level alarm. Upon further investigation, we discovered that a periodically faulty low level float would stick in the alarm position and not allow the pumps to run, thus causing the high well level. The system is operating properly in backup mode, however we will do some investigating to determine if a replacement for the lift station controller exists.

On Thursday 12/3/15, we replaced the faulty Multitrode MT2PC controller at Northport Point Lift Station with a controller that we had in our critical spare parts inventory. We reprogrammed all of the parameters (there are a lot) and the station is back to full operation.

On the Horizon

- Return Blower #2 to service and inspect after significant runtime.
- Have Blower #1 rebuilt hopefully onsite.
- Replace light on basin.
- Northport Point Lift station alarm dialer replacement.
- Effluent Flow meter design, spec and installation.
- Settling basin cleaning in the spring
- Weed control on the Rapid Infiltration Beds in the spring

Budget Items

November-15	
Repairs Spending Treatment Plant & Collection System	$1,109.52
Repairs Spending Treatment Plant & Collection System **Year to Date**	$21,806.04
Repairs Spending Residential Grinder Pumps	$0.00
Repairs Spending Residential Grinder Pumps **Year to Date**	$10,603.39
Repair Hours Residential Grinder Pumps	0
Repair Hours Residential Grinder Pumps **Year to Date**	186.5
Repair Hours Treatment Plant	16.8
Repair Hours Treatment Plant **Year to Date**	79.8
Repair Hours Collection System (lift stations/sewer)	15
Repair Hours Collection System (lift stations/sewer) **Year to Date**	50

Total Repair Hours **Year to Date**	316.3
Total Repair Spending **Year to Date**	$32,409.43

Total Repair Hours **Year to Date in 2014**	397.5
Total Repair Spending **Year to Date in 2014**	$26,402.72

These budget numbers are an estimate.

If you have any questions or concerns please feel free to contact me.

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